

IN THE CLAIMS:

1-10 (cancelled).

11. (currently amended) An engraving element of an electronic engraving machine for engraving printing forms, comprising:

a shaft oscillating around a longitudinal axis with small rotational angles;

a drive system for the shaft;

a lever attached to an end of the shaft with an engraving stylus for engraving the printing form;

a restoring element for the shaft;

a damping mechanism for the shaft having a damping element secured to the shaft as well as a stationary damping chamber filled with a damping medium connected to the shaft via a flexible bearing ;

the damping element being formed of at least one damping disk that is circular at least in regions and extending perpendicular to the shaft;

the damping chamber being designed at least as a hollow-cylindrical segment around the shaft into which the damping disk projects;

the damping chamber extending at least over the circular regions of the damping disk; and

the damping medium being a ferro-fluidic fluid[.]; and

the flexible bearing comprising a plurality of flexible elements connecting the damping disk to the stationary damping chamber so that as the shaft oscillates the flexible elements bend, the flexible elements together with the ferro-fluidic fluid damping the oscillating shaft.

12. (currently amended) An engraving element of an electronic engraving machine for engraving printing forms, comprising:

a shaft oscillating around a longitudinal axis with small rotational angles;

a drive system for the shaft;

a lever attached to an end of the shaft with an engraving stylus for engraving the printing form;

a restoring element for the shaft;

a damping mechanism for the shaft having a damping element secured to the shaft as well as a stationary damping chamber filled with a damping medium connected to the shaft via a bearing ;

the damping element being formed of at least one damping disk that is circular at least in regions and extending perpendicular to the shaft;

the damping chamber being designed at least as a hollow-cylindrical segment around the shaft into which the damping disk projects;

the damping chamber extending at least over the circular regions of the damping disk;

the damping medium being a ferro-fluidic fluid; and

~~The engraving element according to claim 11 wherein the damping mechanism is not rotationally symmetrical relative to an axial direction of the shaft.~~

13. (currently amended) An engraving element of an electronic engraving machine for engraving printing forms, comprising:

a shaft oscillating around a longitudinal axis with small rotational angles;

a drive system for the shaft;

a lever attached to an end of the shaft with an engraving stylus for engraving the printing form;

a restoring element for the shaft;

a damping mechanism for the shaft having a damping element secured to the shaft as well as a stationary damping chamber filled with a damping medium connected to the shaft via a bearing ;

the damping element being formed of at least one damping disk that is circular at least in regions and extending perpendicular to the shaft;

the damping chamber being designed at least as a hollow-cylindrical segment around the shaft into which the damping disk projects;

the damping chamber extending at least over the circular regions of the damping disk;

the damping medium being a ferro-fluidic fluid; and

~~The engraving element according to claim 11 wherein~~ the damping element is provided with through holes proceeding in an axial direction of the shaft.

14. (currently amended) An engraving element of an electronic engraving machine for engraving printing forms, comprising:

a shaft oscillating around a longitudinal axis with small rotational angles;

a drive system for the shaft;

a lever attached to an end of the shaft with an engraving stylus for engraving the printing form;

a restoring element for the shaft;

a damping mechanism for the shaft having a damping element secured to the shaft as well as a stationary damping chamber filled with a damping medium connected to the shaft via a bearing ;

the damping element being formed of at least one damping disk that is circular at least in regions and extending perpendicular to the shaft;

the damping chamber being designed at least as a hollow-cylindrical segment around the shaft into which the damping disk projects;

the damping chamber extending at least over the circular regions of the damping disk;

the damping medium being a ferro-fluidic fluid; and

~~The engraving element according to claim 11 wherein~~ the bearing connected to the shaft comprises a spoke bearing.

15. (currently amended) The engraving element according to claim 14 wherein the spoke bearing is formed of:

an inner ring surrounding and connected to the shaft;

one of a stationary outer ring and an outer ring segment surrounding the shaft at least in regions and spaced from the inner ring; and

a plurality of leaf springs as the spokes of said spoke bearing proceeding radially relative to the shaft whose ends are respectively connected to the inner ring and to one of the outer ring and the outer ring segment.

16. (previously presented) The engraving element according to claim 14 wherein the damping mechanism and the spoke bearing are structurally united with one another.

17. (previously presented) The engraving element according to claim 11 wherein the drive system for the shaft is designed as one of a piezoelectric and a magnetostrictive drive element.

18. (currently amended) The engraving element according to claim 11 wherein the flexible bearing ~~has a flexible member~~ comprises leaf springs as said flexible elements.

19. (currently amended) A damping mechanism for an engraving element for engraving printing forms, comprising:

a damping element secured to a shaft of the engraving element oscillating around a longitudinal axis with small rotational angles;

a stationary damping chamber filled with a damping medium;

the damping element being formed of at least one damping disk circular at least in regions and extending perpendicular to the shaft;

the damping chamber being designed at least as a hollow-cylindrical segment around the shaft into which the damping disk projects;

the hollow-cylindrical damping chamber extending at least over the circular regions of the damping disk; and

the damping medium comprising a ferro-fluidic fluid[[]]; and

a plurality of flexible elements connecting the damping disk to the stationary damping chamber so that as the shaft oscillates the flexible elements bend, the flexible elements together with the ferro-fluidic fluid damping the oscillating shaft.

20. (currently amended) A damping mechanism for an engraving element for engraving printing forms, comprising:

a damping element secured to a shaft of the engraving element oscillating around a longitudinal axis with small rotational angles;

a stationary damping chamber filled with a damping medium;

the damping element being formed of at least one damping disk circular at least in regions and extending perpendicular to the shaft;

the damping chamber being designed at least as a hollow-cylindrical segment around the shaft into which the damping disk projects;

the hollow-cylindrical damping chamber extending at least over the circular regions of the damping disk;

the damping medium comprising a ferro-fluidic fluid; and

~~The damping mechanism according to claim 19 wherein it has~~ the damping mechanism having a shape which is not rotational-symmetrical to an axial direction of the shaft.

21. (currently amended) A damping mechanism for an engraving element for engraving printing forms, comprising:

a damping element secured to a shaft of the engraving element oscillating around a longitudinal axis with small rotational angles;

a stationary damping chamber filled with a damping medium;

the damping element being formed of at least one damping disk circular at least in regions and extending perpendicular to the shaft;

the damping chamber being designed at least as a hollow-cylindrical segment around the shaft into which the damping disk projects;

the hollow-cylindrical damping chamber extending at least over the circular regions of the damping disk; and

the damping medium comprising a ferro-fluidic fluid; and

~~The damping mechanism according to claim 19 wherein~~ the damping element is provided with through holes proceeding in an axial direction of the shaft.

22. (previously presented) The damping mechanism according to claim 19 wherein the stationary damping chamber is connected to the shaft by a flexible bearing.

23. (previously presented) The damping mechanism of claim 22 wherein the flexible bearing has leaf spring spokes.

24. (currently amended) A damping mechanism for an engraving element for engraving printing forms, comprising:

a damping element secured to a shaft of the engraving element oscillating around a longitudinal axis;

a damping chamber filled with a damping medium;

the damping element being formed of at least one damping disk and extending perpendicular to the shaft;

the damping chamber being designed at least as a hollow-cylindrical segment around the shaft into which the damping disk projects;

the hollow-cylindrical damping chamber extending over the damping disk; and

the damping medium comprising a ferro-fluidic fluid[.]; and

a plurality of flexible elements connecting the damping disk to the stationary damping chamber so that as the shaft oscillates the flexible elements bend, the flexible elements together with the ferro-fluidic fluid damping the oscillating shaft.